

## ABSTRACT

The present invention contemplates an ophthalmic adaptive-optics instrument to obtain patient-verified prescription of low and high-order aberrations. The present invention further contemplates a new and improved method and apparatus of customized corneal ablation using a patient-verified prescription of low and high-order aberrations. The patient-verified prescription of high-order aberrations characterizes the aberration correction needed for optimal visual acuity and enables customized corneal ablation to achieve optimal visual acuity for each individual patient.